

Claims

- [c1] Intrinsic gauging assembly for a ferrule type tube fitting, comprising:
- a coupling body having a threaded end that is capable of receiving a tube end;
 - a threaded coupling nut that mates with said threaded end of the coupling body;
 - at least one ferrule retained in the nut interior; and
 - a visually perceptible marking on the coupling body that is visible when the fitting is in a finger tight condition, and that is substantially imperceptible after the fitting has been assembled on a tube end to an initial pull-up position, wherein said marking comprises at least two demarcations on said coupling body to form a leading and trailing marking edge; said leading edge corresponding to a predetermined initial pull-up of the assembly and said trailing edge corresponding to an additional predetermined axial displacement of said nut relative to said body beyond said initial pull-up.
- [c2] The assembly of claim 1 wherein said marking comprises a machined surface on the coupling body.
- [c3] The assembly of claim 2 wherein said marking is adja-

cent said threaded end of the coupling body.

- [c4] The assembly of claim 2 wherein said machined surface is knurled.
- [c5] The assembly of claim 1 wherein said marking has an axial position that corresponds to a predetermined axial advance of the coupling nut relative to the coupling body for initial pull-up.
- [c6] The assembly of claim 1 wherein said marking comprises a machined recess in a neck portion of said coupling body.
- [c7] The assembly of claim 1 wherein said marking comprises a machined recess in said coupling body.
- [c8] The assembly of claim 1 wherein marking comprises a band having a predetermined axial length.
- [c9] The assembly of claim 1 wherein said marking comprises a colored machined groove.
- [c10] The assembly of claim 1 wherein said marking comprises a demarcation that is axially positioned on said body and corresponds to a predetermined axial displacement of said nut relative to said body for initial pull-up.
- [c11] The assembly of claim 10 wherein said demarcation

comprises an edge that substantially aligns with a forward end of said coupling nut when the nut has been axially displaced relative to the body by said predetermined axial displacement for initial pull-up.

[c12] The assembly of claim 10 wherein said demarcation is substantially obstructed from view after the nut has been axially displaced relative to the body by at least said predetermined displacement for initial pull-up.

[c13] Intrinsic gauge for a ferrule type tube fitting assembly, comprising:
a coupling body having a threaded end that can receive a tube end and at least one ferrule and that can be mated with a coupling nut as a fitting assembly;
said coupling body having a visually perceptible marking thereon that is visible when the fitting assembly is in a finger tight condition, and that has a predetermined relationship to the coupling nut when the fitting assembly has been properly pulled up on a tube end; said marking corresponding to a predetermined axial displacement of the nut relative to the body for initial pull-up, wherein said marking has a predetermined axial length defined by two demarcations, a first demarcation corresponding to a predetermined axial displacement of the coupling nut relative to the coupling body for initial pull-up and a second demarcation corresponding to an additional axial

displacement of the nut relative to the body beyond said initial pull-up.

- [c14] The assembly of claim 13 wherein said marking comprises a machined surface on the coupling body.
- [c15] The assembly of claim 14 wherein said surface is adjacent a back end of said threaded end of the coupling body.
- [c16] The assembly of claim 14 wherein said machined surface is knurled.
- [c17] A method for gauging proper pull-up of a coupling nut on a coupling body in a ferrule type fitting, comprising the steps of:
 - a. forming a visually perceptible marking on the coupling body;
 - b. said forming step comprising positioning the marking to correspond to a predetermined axial displacement of the coupling nut relative to the coupling body for initial pull-up; and
 - c. assembling the coupling nut onto the coupling body until the marking corresponds with the nut;
 - d. wherein the step of forming the marking comprises the step of forming at least two demarcations on the coupling, body; and forming said demarcations as a

leading edge and a trailing edge wherein the leading edge corresponds to axial displacement of the nut relative to the body for initial pull-up of the fitting and the trailing edge corresponds to an additional axial displacement of the nut relative to the body beyond the initial pull-up.

[c18] The method of claim 17 wherein the step of forming the marking comprises the step of machining a groove in the coupling body.

[c19] The method of claim 18 wherein the step of forming the marking comprises the step of applying a color surface to said groove.

[c20] The method of claim 18 wherein the step of forming the marking comprises the step of knurling the surface of said groove.

[c21] The method of claim 17 comprising the step of imparting relative rotation between the nut and body to produce an axial displacement of the nut relative to the body until said marking is substantially visually obstructed..